It is seen that the expression differs considerably from the standard expression for the sensitivity which is given by Eq (6). Figure 1 shows the dependence of the ratio of the sensitivity, as evaluated by Eqs (5) and (6), on the parameter $\hbar\omega/k(T_B + T_a)$. Figure 2, constructed by employing Eq (5), shows the dependence of the sensitivity δT_a on the temperatures $T_B + T_a$. The radiation energy per 1 sec received from the direction defined by φ and θ over a spherical angle $d\Sigma$ is defined by Eq (9), where $T_H(\varphi,\theta)$ is the brightness temperature of the source. Now, an antenna having an effective area $A(\varphi,\theta)$ produces an energy (per unit bandwidth) which is defined by Eq (10). If the directivity of the antenna is defined by:

$$G(\varphi,\theta) = \frac{\omega^2}{\pi c^2} A(\varphi,\theta) ,$$

Card3/5 an expression in the form of Eq (11) is obtained.

Sensitivity of a Radiotelescope at Low Input-noise Levels

On the basis of Eqs (5) and (11), it is possible to determine the sensitivity of the radiotelescope with regard to the temperature of the source, provided the directional pattern of the antenna is known. If the spherical angle Σ_M of the source is small, so that $G(\varphi,\theta)$ is a constant quantity within this angle, Eq (11) can be written as Eq (14). The sensitivity of the radiotelescope δT_i, which corresponds to the lowest perceptible δT_a, is therefore given by Eq (16). The authors express their gratitude to F.V. Bunkin for the discussion of the investigated problems. There are 2 figures and 3 Soviet references.

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SOV/109-4-6-20/27

Sensitivity of a Radiotelescope at Low Input-noise Levels

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva AN SSSR (Physics Institute imeni P.N. Lebedev of the Ac.Sc., USSR)

SUBMITTED: April 28, 1958

Card 5/5

83256

S/109/60/005/009/001/026
E140/E455

AUTHOR: Chikhachev, B.M.

TITLE: Oscillations of Refraction of Solar Radio Radiation

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.9, pp.1359-1369

TEXT: The work consists of an analysis of radioastronomical observations on the sun carried out in 1949, to study radiation from groups of sunspots. The results of the observation were presented in Ref.1. The present work concerns a study of vertical refraction of radio waves in the earth's atmosphere, as determined from these observations. Observations on wavelength 1.5 and 2 m permitted separation of tropospheric and ionospheric refraction components. A periodic variation of the ionospheric component was found. Observations made on the southern shore of the Crimea used a marine radio interferometer with beam widths of 8.6° at 1.5 m wavelength and 11.5° at 2 m wavelength. Observations were carried out only at sunrise and sunset. The beam width permitted clear interference patterns to be obtained from sunspot group. By comparing the optical elevation of the sun

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Oscillations of Refraction of Solar Radio Radiation

with the radio elevation, the magnitude of radio refraction was determined. Generally this refraction was a smoothly-decreasing function of solar elevation but, at certain times, oscillations (Fig.2) were observed. These oscillations were always observed at sunrise. Oscillation of refraction of solar radiation at sunset was never observed, but oscillation of refraction of radio stars rising above the horizon at sunset was observed, although with far lower frequency than the oscillations of solar radiation at sunrise. The angles at which the extreme points of the oscillation occurred varied slowly with time and showed a distinct correlation with passage of the sunspot group across the solar disc. Simultaneously with variations in refraction, a variation of signal power with the same period was observed, leading the variations of refraction by a quarter cycle. The observed phenomena are interpreted in terms of a periodic variation of free electron density in the ionosphere, with a large space period and a stationary structure over a period of the order of 1 hour. These variations of free electron density agree in the principal parameters with the cellular waves (Martyn, Ref.5), arising in the

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83256

S/109/60/005/009/001/026
E140/E455

Oscillations of Refraction of Solar Radio Radiation

presence of winds in the upper atmosphere. It is suggested in the present paper that cellular waves arise at sunrise under the influence of emanations from groups of sunspots and attenuate strongly towards the end of the day; their angles of inclination are thought to depend on the position of the group of sunspots on the solar disc. The experimental data on which this paper is based were obtained by S.E.Khaykin. There are 10 figures, 1 table and 6 references: 2 Soviet and 4 English).

SUBMITTED: February 9, 1959

Card 3/3

27483
S/053/61/075/001/001/003
B125/B108

9.1592 1538,1057

AUTHORS: Basov, N. G., Krokhin, O. N., Orayevskiy, A. N., Strakhovskiy, G. M., Chikhachev, B. M.

TITLE: Investigation of relativistic effects with the aid of molecular and atomic frequency standards

PERIODICAL: Uspekhi fizicheskikh nauk, v. 75, no. 1, 1961, 3 - 59

TEXT: The present paper gives a survey of experiments verifying the general theory of relativity, some problems in special relativity theory, and cosmological hypotheses by means of molecular and atomic frequency standards. V. L. Ginzburg (UFN, 59, 11 (1956); sb. "Eynshteyn i sovremennaya fizika", M., Gostekhizdat, 1956, str. 93 - 139) made suggestions for the experimental verification of general relativity theory. By means of cesium frequency standards with two separate resonators, an absolute frequency stability of $\pm 1.5 \cdot 10^{-10}$ was attained. A further improvement of the stability of cesium standards requires the use of narrower spectral lines. With slow molecule beams, an absolute stability

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Investigation of relativistic effects...

of up to 10^{-12} was reached. A certain increase of stability may be attained using a beam of thallium atoms instead of cesium. Up to now, however, the authors have no information on such use of thallium. The electrical resonance method, i. e., the use of spectral lines of a molecular beam caused by transitions between rotational levels, guarantees the same stability as in cesium standards. The frequency standards relying on spectral lines of monatomic alkaline metals permit very sensitive indications. Quartz resonators, too, give a stability of 10^{-10} and, when immersed in liquid helium, even of 10^{-11}. The power of molecular generators has to be amplified by means of a low-noise amplifier (e. g., MBB(LBV)) and an amplifying klystron. Self-tuning is necessary for high-precision frequency measurements. In measurements of the gravitational frequency shift by means of molecular generators on board of artificial satellites, the influence of the first order Doppler effect has to be eliminated. This can be done, for instance, by an exact measurement of long time intervals on the Earth and on the satellite with subsequent comparison by radiocommunication. Another method of this kind is based on the mixing of a signal emitted from the Earth (frequency f) with the signal

Investigation of relativistic effects...

of a molecular generator on the satellite (frequency 2f). Ionospheric and tropospheric fluctuations have to be taken into account. Measurements of the gravitational shift of frequency are being prepared (Sci. News Lett., 76, 35 (July 18, 1959)). The gravitational shift may be measured from two points of different altitude on the Earth's surface (mountain) without the use of satellites and, therefore, without consideration of the Doppler effect of first and second order. For H = 3.2 km and f = 10^{10} cps, $\Delta f = 3.4 \cdot 10^{-3}$ cps. At present, two first-order experiments are known for the verification of special relativity theory. In one of them (proposed by Møller and carried out by Townes), two inversely directed beams of excited ammonia molecules were sent toward each other through the horizontal resonators of two molecular generators mounted on a rotatable plate. The expected frequency deviations were not found in these experiments. The other first-order experiment with respect to (v/c) is based on the measurement of the phase difference of two nonsynchronized molecular generators placed on a rotatable base at a distance of a few meters. Some cosmological effects may be verified experimentally by means of highly stable atomic clocks. An idea of V. A. Fok (G. M. Strakhovskiy, Doklad na Lomonosovskikh chteniyakh v MGU, 1958) concerning singular reference

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systems is mentioned. The variations of the gravitational constant ($\delta g = g.10^{-10}$ within a year, according to Dirac) can be verified by comparing the motion of a high-precision atomic clock with the revolution period of an Earth satellite. The eccentricity of the Earth's orbit may also have an influence on the gravitational constant. The hypothetical time dependence $\delta\alpha/\alpha \sim 10^{-2}\,\delta g/g$ of the fine structure constant α (L. D. Landau et al., DAN SSSR, 95, 497, 773, 1177 (1954)) can be verified experimentally by comparing the motion of two atomic clocks of different types. The character of gravitation may be determined by another series of experiments. There are 31 figures and 113 references: 47 Soviet and 66 non-Soviet. The three most recent references to English-language publications read as follows: Missiles and Rockets, No. 1, 1961, p. 34; B. Hoffmann, Phys. Rev. 121, 337 (1961); S. M. Bergmann, J. Appl. Phys. 31, 275 (1960).

S/504/62/017/000/005/007
I046/I246

AUTHOR: Chikhachev, B.I.

TITLE: The effective reception area of a radiointerferometer

SOURCE: Akademiya nauk SSSR. Fizicheskiy institut. Trudy, v. 17. Moscow, 1962. Radioastronomiya, 137-148

TEXT: Developing the concept of the effective reception area Q of a radiointerferometer as the signal-noise ratio of the instrument, the author derives a criterion for maximum effective area:

$$Q_{max} = \sum_{i=1}^{n} q_i = q_i / a_i^2, \quad (1 \leq i \leq n)$$

where q_i is the effective area of the i-th antenna, a_i^2 is the fraction of the signal transmitted from the i-th antenna to the receiver. This condition can obviously be satisfied for any number of antennas in a radiointerferometer and for any space distribution of antennas by designing a suitable antenna-receiver circuit. In practice, however,

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The effective reception area....

certain relationships are imposed on q_i and a_i by the directivity diagram, and the maximum criterion can be satisfied only under a definite set of conditions which have to be calculated proceeding from the specific phase and amplitude characteristics of the problem. There are 6 figures.

Card 2/2

CHIKHACHEV, B.M.

BASOV, N.G.; KROHIN, O.N. [Krokhin, O.N.]; ORAEVSKI, A.N. [Orayevskiy, A.N.]; STRAHOVSKI, G.M. [Strakhovskiy, G.M.]; CIHACIEV, B.M. [Chikhachev, B.M.]

Possibility of studying relativistic effects with the aid of the molecular and atomic standards of frequency. Analele [illegible]t 16 no.2:83-146 Ap-Je '62.

ACCESSION NR: AR4014772 S/0058/63/000/012/H034/H034

SOURCE: RZh. Fizika, Abs. 12Zh231

AUTHOR: Kardashev, N. S.; Chikhachev, B. M.

TITLE: Correlation receiver for the investigation of cosmic radio emission at 21 cm wavelength

CITED SOURCE: Soobshch. Gos. astron. in-ta im. P. K. Shternberga, no. 126, 1963, 66-71

TOPIC TAGS: radioastronomy, cosmic radio emission, 21 cm wavelength, correlation receiver, continuous radioastronomy radiation, hydrogen spectral line, correlation receiver stability

TRANSLATION: A receiver is described, intended for the investigation of cosmic radio emission both in the continuous spectrum and in the hydrogen spectral line. Particular attention is paid to

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ACCESSION NR: AR4014772

operating stability of the correlation receiver. The authors conclude that to insure sufficient stability of the zero level of the correlation receiver it is necessary to employ separate antennas with as low a mutual coupling as possible. The receiver built can register reliably antenna temperatures of ~0.5K. A Kislyakov.

DATE ACQ: 24Jan64 SUB CODE: AS, GE ENCL: 00

Card 2/2

KARDASHEV, N.S.; CHIKHACHEV, B.M.

Correlation receiver for investigating cosmic radio emission on the wavelength λ = 21 cm. Soob.GAISH no.126:66-71 '63. (MIRA 17:2)

ACC NR: AP6036378 (A,N) SOURCE CODE: UR/0109/66/011/011/2072/2074

AUTHOR: Chikhachev, B. M.

ORG: Physics Institute im. P. N. Lebedev, AN SSSR (Fizicheskiy institut)

TITLE: A stable large-area radio interferometer

SOURCE: Radiotekhnika i elektronika, v. 11, no. 11, 1966, 2072-2074

TOPIC TAGS: interferometer, interference measurement, radio emission

ABSTRACT: Some characteristics of radio interferometers with a base exceeding 100 km and an ~1" interference lobe width are discussed. These interferometers are used in precise measurements of the size and coordinates of discrete cosmic radio emission sources. The size is usually determined from the sharpness of interference pictures; the coordinates in this case cannot, however, be determined accurately, mainly because of large fluctuations in the phase of relay systems between the interferometer antennas. The same method, used earlier by R. S. Badessa, N. G. Bassov et al. to compensate the Doppler effect in radio communication between artificial satellites and ground stations, is here proposed for automatically compensating the above phase

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ACC NR: AP6036378

fluctuations. Multiplication of radio emission signal frequencies reduces the S/N ratio in the radio interferometers. A procedure is also briefly discussed for eliminating this deficiency and for preserving the sensitivity of radio interferometers. [WA-75] [JR]

SUB CODE: 20,17/ SUBM DATE: 11Apr66/ ORIG REF: 004/ OTH REF: 005

Card 2/2

CHIKHARAKH, L.F.

Organization of preventative maintenance in the servicing of locomotives at the railroad repair shop in Orenburg. Elek. i tepl. tiaga 5 no.5:16-17 My '61. (MIRA 14:7)

1. Starshiy master tsekha profilakticheskogo remonta depo Orenburg.
(Orenburg--Railroads--Repair shops)

KLEMENT'YEVA, A.I.; SKOROKHODOV, M.A.; Prinimali uchastiye: ALEKSANDROV, G.P.; BABUN, F.Ya.; BAYBARIN, P.P.; VAYNSHTEYN, T.S.Z.; GUSEV, L.V.; ZHETVIN, N.P.: KONTSEVAYA, Ye.M.; LEVINA, M.M.; NOVLYANSKAYA, K.A.; PODVOYSKIY, L.N.; TRUNTSEV, D.S.; FLEROV, N.G.; CHIKHACHEV, I.A.; YUROV, Yu.M.; GUDKOVA, N., red.; YEGOROVA, I., tekhn.red.

[Light over the gate] Svet nad zastavoi. Moskovskii rabochii, 1959. 422 p. (MIRA 12:4)
(Moscow--Metallurgical plants)

CHIKHACHEV, I.; CHESNOKOV, N., agitator, laureat Stalinskoy premii

The important thing is to keep in contact with life. Sov. profsoiuzy 16 no.12:29-32 Je '60. (MIRA 13:6)

1. Zamestitel' predsedatelya moskovskogo zavkoma zavoda "Serp i molot" (for Chikhachev). 2. Brigadir brigady kommunisticheskogo truda moskovskogo zavoda "Serp i molot" (for Chesnokov).
(Moscow—Steel industry) (Trade unions)

KALININ, Nikolay Ivanovich [deceased]; SAL'NIKOV, Aleksandr Sergeyevich; CHIKHACHEV, Mikhail Semenovich; KRIUSHIN, V.N., red.; BOBROVA, Ye.N., tekhn.red.

[Mechanization of accounting in administrative units of railroads] Mekhanizatsiia bukhgalterskogo ucheta v khoziaistvennykh edinitsakh zheleznykh dorog. Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 240 p. (MIRA 11:12)

(Machine accounting)
(Railroads--Accounts, bookkeeping, etc.)

CHIKHACHEV, I.

Disseminating progressive work methods in a steel plant. Sov.prof-soiuzy 3 no.4:26-29 Ap '55. (MLRA 8:5)

1. Predsedatel' komissii po proizvodstvenno-massovoy rabote komiteta profsoiuza moskovskogo zavoda "Serp i molot"
(Steelworks) (Trade unions)

KOROVINA, N.N.; MOLODTSOVA, A.N.; CHIKHACHEV, M.S.; MAKAROV, M.S., ted.; SAZONOV, N.M., red.

[Multiple-counter Askot-class 170 adding machine] Mnogo-schetchikovaia summiruiushchaia mashina-avtomat Askota klassa 170. Moskva, Statistika, 1964. 135 p.
(MIRA 18:1)

SYSOYEV, P.V., inzh., red.; CHIKHACHEV, N.A., inzh., red.; KRASHENINNIKOVA, G.V., inzh., nauchnyy red.; PROSKURYAKOV, A.V., inzh., red.; UTKIN, A.V., inzh., red.; SUKHAREVA, R.A., red.; SITNIKOV, L.P., red.; KUDRYAVITSKAYA, A.A., tekhn. red.

[The established classes of patent licenses and certificates granted to Soviet inventors; an index divided into subclasses, groups, and subgroups]Ukazatel' klassov avtorskikh svidetel'stv i patentov, vydavaemykh v SSSR, s podrazdeleniem ikh na podklassy, gruppy i podgruppy. Moskva, TSentr. biuro tekhn. informatsii, 1962. 820 p. (MIRA 15:11)

1. Russia (1923- U.S.S.R.)Komitet po delam izobreteniy i otkrytiy.

(Patent licenses)

OVCHINNIKOV, Yu.F.; SOYFER, D.V.; CHIKHACHEV, O.P.; Prinimali uchastiye: ARBUZOV, B.A.; GORBUNOV, A.M.; KLEYNER, L.M.

Making aluminum alloy parts with intricate internal channels. Alium. splavy no.1:195-201 '63. (MIRA 16:11)

CHIKHACHEV, P.

Novorossiysk cement plant worker. Stroi.mat., izdel.i konst. 2 no.2:15-16 F '56. (MLRA 9:6)
(Zhushnev, Vasilii Panfilovich)

1. CHIKHACHEV, P. K.

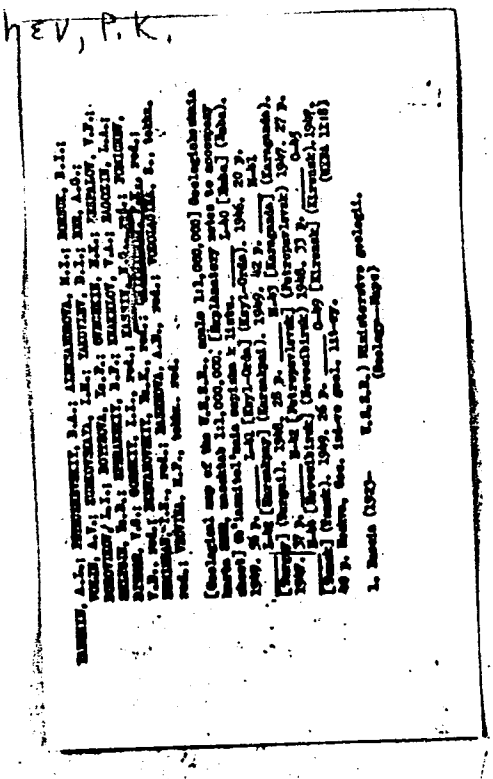
2. USSR (600)

4. Osh District - Limestone

7. Report of the flux-prospecting party during 1942. (Abstract.) Izv. Glav. upr. geol. fon., no. 3, 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

Chikhachev, P.K.



OVECHKIN, N.K.,; CHIKHACHEV, P.K., redaktor, POPOV, N.D., tekhnicheskiy redaktor.

[Deposists from the Middle Paleogene in the Turgay Lowland and the northern Aral Sea region] Otlozheniia srednego paleogena Turgaiskoi vpadiny i Severnogo Priaral'ia. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane nedr, 1954. 163 p. (MLRA 7:12)

(Turgay Lowland--Geology, Stratigraphic) (Aral Sea region--Geology, Stratigraphic)

CHIKHACHEV, P. K.

GODIN, Yu.N.; LUPPOV, N.P.; SYTIN, Yu.I.; CHIKHACHEV, P.K.

Principal tectonic characteristics of the Turkmen S.S.R. Sov. geol. 1 no.1:3-24 Ja '58. (MIRA 11:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.
(Turkmenistan--Geology, Structural)

CHIKHACHEV, P.K.

Geological mapping of closed areas on a 1:200,000 scale; plains having on the surface slightly dislocated young loose formations. Sov.geol. 2 no.1:121-128 Ja '59. (MIRA 12:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.
(Geology--Maps)

MIRONOVA, Lyudmila Vladimirovna; CHIKHACHEV, P.K., red.; ROSSOVA, S.M., red.izd-va; GUROVA, O.A., tekhn.red.

[Paleogene Bukhara series on Central Asia; stratigraphy and index mollusk complexes] Bukharskaia svita paleogena Srednei Azii; stratigrafiia i rukovodiashchie kompleksy molliuskov. Moskva, Gos. nauchn. -tekhn.izd-vo lit-ry po geologii i okhrane nedr, 1960. 174 p. (Leningrad. Vsesoiuznyi geologicheskii institut. Trudy, vol. 38) (MIRA 14:3)
(Soviet Central Asia—Geology, Stratigraphic)
(Mollusks, Fossil)

SYTIN, Yu.I.; CHIKHACHEV, P.K.; CHUYENKO, P.P.

Basic features of the tectonics and the development of the structures of the western part of Central Asia. Trudy VSEGEI 42:7-37 '60. (MIRA 14:9)

(Soviet Central Asia--Geology, Structural)

CHIKHACHEV, S.A. , Engineer

ENIMS (-1943-)

"Stages in the Development of the Technology of Machine-Tool Building", Stanki I Instrument, 14, No. 9-10, 1943.

CHIKHACHEV, S.A., Engineer

Chief Technologist, ENIMS (-1944-)

"Conveyer Methods of Production should be Widely Introduced in Machine-Tool Building." Stanki I Instrument Vol. 15, No. 1-2, Jan-Feb, 1944

CHIKHACHEV, S.A., inzhener.

Development of mechanical engineering. Mashinostroitel' no.11:7-10 N '57. (MIRA 10:10)
(Mechanical engineering)

Chikhachev, S.A

CHARNKO, Donat Vladimirovich, prof.; STANKEVICH, V.G., retsenzent; CHIKHACHEV, S.A., dots., red.; MOROZOVA, M.N., red.izd-va; TIKHANOV, A.Ya., tekhn.red.

[Principles of planning continuous mass production in machinery assembling plants]. Osnovy proektirovaniia ptochnogo proizvodstva v mekhanosborochnykh tsekhakh. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 255 p. (MIRA 11:2)
(Machinery industry)

CHIKHACHEV S. A.

PHASE I BOOK EXPLOITATION 456

Ayzenshtadt, L. A., and Chikhachev, S. A.

Ocherki po istorii stankostroyeniya SSSR (Studies in the History of Tool Making in the USSR) Moscow, Mashgiz, 1957. 527 p. 5,500 copies printed.

Reviewer: Zhed', M. S.; Ed.: Stankevich, V. G.; Tech. Ed.: Sokolova, G. F.; Managing Ed. for literature on metalworking and tool making: Beyzel'man, R. D.

PURPOSE: This book was written for students, scientists, engineers and workers of the machine-building industry.

COVERAGE: In this collection of articles, consisting of three parts, the authors review the history of machine building in Russia and stress the role of machine tools in the development of the country as a whole. Part One covers the period from the Middle Ages to the October Revolution. The achievements of Peter the Great are lauded, but the authors dwell mostly on the economic and ideological aspects of that period. In Part Two the authors deal with the period after the Revolution to the German invasion. They

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mention that only in the early thirties was the Soviet machine tool industry beginning to gain in importance. The author admits that the machines built in the USSR were copies of Western types. It is also stated that around 1934 new technological methods began to find wider application in the Soviet machine tool industry. These were primarily: higher cutting speeds, the use of wear-resistant alloys, and the introduction of semiautomatic operations. The German invasion caused a relocation of industry to the Ural area where new industrial centers were established. Part Three covers the postwar era. It is stated that after a period of restoration there was a very sharp increase in the production of machine tools with special emphasis on semi-and fully automatic machinery and the introduction of automation. The most important modern Soviet machine tools are described, illustrated, and their general characteristics and basic dimensions are given. Some space is devoted to high-speed machining using carbide tools. Some examples of speeds and rates of machining are given. Author Ayzenshtadt describes automated lines for the production of automotive engine blocks, pistons, valves and other components. There is also a description of a fully automated ball bearing and roller bearing plant in Moscow which produces 1,500,000 units per annum. This plant is claimed to be the most advanced in the world. There are some tables with statistical data pertaining to machine tool production. The above articles indicate the general trend in the Soviet machine-building industry, namely, the boosting of machine tool production and the introduction of automation on a wide scale. There are 9 Soviet references.

Studies in the History (Cont.)

TABLE OF CONTENTS:

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GO/gmp
July 29, 1958

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YAKOBSON, Mikhail Osipovich; CHIKHACHEV, S.A., nauchnyy red.; MOSKVINA, I.Ya., red.; GOROKHOV, Yu.N., tekhn.red.

[Modern methods in machining spur gears] Sovremennye metody obrabotki tsilindricheskikh zubchatykh koles. Moskva, Vses. uchebno-pedagog.izd-vo Trudrezervizdat, 1958. 91 p. (MIRA 12:9)
(Gear cutting)

SOBOLEV, Nikolay Pavlovich; CHIKHACHEV, S.A., nauchnyy red.; LUKASHUK, V.A., red.; TOKER, A.M., tekhn.red.

[Tool, gauge and templet making] Instrumental'no-lekal'nye raboty. Izd.3., perer. i dop. Moskva, Vses.uchebno-pedagog. izd-vo Trudrezervizdat, 1959. 274 p. (MIRA 12:11)
(Machine-shop practice)

YAKOBSON, M.O., doktor tekhn. nauk, prof.; PADRUL', Z.Ya., inzh., retsenzent; CHIKHACHEV, S.A., dots., red.; BAZHENOV, D.V., inzh., red. izd-va; UVAROVA, A.F., tekhn. red.

[Technological processes of machining in automated production] Tekhnologiia mekhanicheskoi obrabotki v avtomatizirovannom proizvodstve; spravochnoe posobie. Moskva, Mashgiz, 1962. 432 p. (MIRA 15:10)
(Automation) (Metal cutting)

MEL'NIKOV, N.F.[deceased]; BRISTOL', B.N.; DEMENT'YEV, V.I.; CHIKHACHEV, S.A., inzh., retsenzent; LIBERMAN, B.S., inzh., retsenzent; GLEYZER, L.A., doktor tekhn. nauk, prof., red

[Technology of the manufacture of machinery] Tekhnologiia mashinostroeniia. Moskva, Mashinostroenie, 1965. 367 p. (MIRA 18:4)

CA CHIKACHEV, S.M.

Quartz from Bashkiriya. S. M. Chikachev. *Zapiski Vsesoyuznogo Mineral. Obshchestva* (Mem. soc. russe mineral.) **76**, 151(1947).—Geol. and crystallographic description of rock crystal, excellently transparent and colorless; most frequent are Dauphiné twins. The reasons for their restricted com. value is the relatively small size of the crystals, their twinning, and the abundance of gas inclusions.
W. Eitel

PA 39/49152

CHIKHACHEV, S. M.

Mar 49

USSR/Geology
Rock Salt

"The Nature of the Jurassic Salt Outcrop in the Kulyabskiy Rayon of Southwest Tadzhikistan," S. M. Chikhachev, All-Union Sci Res Inst of Halurgy, Leningrad, 3 pp

"Dok Ak Nauk SSSR" Vol LXV, No 3

Discusses characteristics of Kulyabskiy rock salt and gypsum deposits, located within boundaries of western section of Yak-suiskiy foothills. Submitted by Acad D. V. Nalivkin, 17 Jan 49.

39/49152

USSR/~~Geophysics~~ - Ural Eopaleozoic

Geology

CHIKHACHEV, S M

"The Relationship of Eopaleozoic Sections of the Urals and China," S. M. Chikhachev

DAN SSSR, Vol 90, No 2, pp 247-249

From a comparison of the characteristics of the Ural and Chinese sections, the author postulates a single Ural-Chinese Eopaleozoic geosynclinal region, whose ~~formed trans-~~ ~~Asiatic~~ folded arch extends at the present time more than 6000 km and is ~~submerged under~~ covered by young deposits in many sections. Presented by Acad D. S. Belyankin, 20 Mar 53.

26T87

CHIKHACHEV, S. M.

AID P - 339

Subject : USSR/Mining

Card : 1/ 1

Author : Chikhachev, S. M.

Title : The nature of structures of the southern region of the Western Siberian lowland

Periodical : Neft. Khoz., v. 32, #5, 58-61, My 1954

Abstract : The structural formations of the southern region of the Western Siberian lowland, as determined by geophysical methods, are described. The basic geological stages of formation of sloped structures indicate that these structures are essentially different in nature from the tectonic structure of the Second Baku Region. Therefore, the lines of approach of prospecting for oil and gas in this region were radically changed. 2 Russian references (1921 and 1948).

Institution : Western Siberian Lowland Institute (VSEGEI) (All-Union Geological Institute)

Submitted : No date

IL'IN, A.N.; KAPUSTIN, A.P., KOGAN, I.A.; POPOV, I.V.; PROZOROVA, N.A.; SAVARENSKIY, I.A.; CHIKHACHEV, S.M.; SOKOLOV, N.I.[deceased], doktor geol-mineral.nauk, otv.red.; SPRYGINA, L.I., red.izd-va; SUSHKOVA, L.A., tekhn.red.

[Karst phenomena near Dzerzhinsk, Gorkiy Province] Karstovye iavleniia v raione goroda Dzerzhinska Gor'kovskoi oblasti. Moskva, Izd-vo Akad.nauk SSSR, 1960. 121 p (Akademiia nauk SSSR. Laboratoriia gidrogeologicheskikh problem. Trudy, vol. 32)
(Dzerzhinsk region (Gorkiy Province)--Karst)

CHIKHACHEV, S.M.

Nickel potential of the gabbro-norite massif in the Kola Peninsula. Sov. geol. 6 no.6:100-107 Je '63. (MIRA 16:7)

1. Kol'skiy filial im. S.M. Kirova AN SSSR, Geologicheskiy institut.
(Kola Peninsula—Nickel ores)
(Kola Peninsula—Hyperite)

CHIKHACHEVA, G.M.; KAZUTO, O.N.; DANILOVA, N.S.

Utilization of phosphorus taken by plants via roots or leaves.
Izv. AN SSSR. Ser. biol. 27 no.1:[redacted] Ja-F '62. (MIRA 15:3)

1. Institut fiziologii rasteniy imeni Timiryazeva AN SSSR.
(PLANTS—NUTRITION)
(PLANTS, EFFECT OF PHOSPHORUS ON)

BARANOVA, Z.Ye.; BURAKOVA, A.T.; BEKASOVA, N.B.; CHIKHACHEVA, P.K., red.; DEMENT'YEVA, T.A., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Stratigraphy, lithology, and flora of Jurassic sediments of the Tuarkyr region.] Stratigrafiia, litologiia i flora iurskikh otlozhenii Tuarkyra. Moskva, Gostoptekhizdat, 1963. 231 p. plates. (Leningrad. Vsesoiuznyi geologicheskii institut. Trudy, vol. 88. Problema neftegazonosnosti Srednei Azii, no.13). (MIRA 16:11)

LEVSHIN, V.L.; ARAPOVA, E.Ya.; BLAZHEVICH, A.I.; VORONOV, Yu.V.; VORONOVA, I.G.; GUTAN, V.B.; LAVROV, A.V.; POPOV, Yu.M.; FRIDMAN, S.A.; CHIKHACHEVA, V.A.; SHCHAYENKO, V.V.

Cathodoluminescence of zinc sulfide and certain other cathodoluminophors. Trudy Fiz. inst. 23:64-135 '63. (MIRA 16:10)

ACCESSION NR: AT4001250 S/2504/63/023/000/0064/013[illegible]

AUTHORS: Levshin, V. L.; Arapova, E. Ya.; Blazhevich, A. I.; Vorobev, Yu. V.; Voronova, I. G.; Gutan, V. B.; Lavrov, A. V.; Popov, Yu. M.; Fridman, S. A.; Chikhacheva, V. A.; Shchavenko, V. V.

TITLE: Study of cathode luminescence of zinc sulfide and other cathode phosphors

SOURCE: AN SSSR. Fizicheskiy institut. Trudy*, v. 23, 1963, 64-[illegible]

TOPIC TAGS: luminescence, cathode luminescence, phosphor, zinc sulfide phosphor, phosphorescence, photoluminescence, zinc sulfide, excitation energy, phosphor excitation

ABSTRACT: This is a review article devoted to a theoretical and experimental analysis of excitation energy losses in cathode luminescence, the approximate maximum cathode luminescence yield, exchange

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ACCESSION NR: AT4001250

of energy between an electron beam and a layer of luminor through which it passes, and also the evolution of individual glow processes as functions of the excitation density and the temperature. Particular attention is paid to an investigation of the persistence properties of ZnS phosphors and their connection with the location and filling of the electron and hole localization levels. A detailed analysis is made of the energy losses resulting from thermalization of the electrons and holes, and it is shown that in cathode luminescence these unavoidable losses are very large and decrease the glow efficiency by approximately 2.5 times. Allowing for other losses, the over-all glow efficiency in cathode luminescence cannot exceed 0.27--0.30. The study of the passage of an electron beam through sublimated layers of zinc-sulfide luminors has established the voltage dependence of the electron penetration depth and the energy losses at different depths of electron penetrations. The dependence of the spectral composition, brightness, and energy glow yield of various zinc-sulfide and phosphate luminors on the current density,

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ACCESSION NR: AT4001250

voltage, and temperature were investigated. A glow efficiency of 0.256 was calculated for one type ZnS-Ag luminor. The attenuation of glow of different types of cathode luminors to 0.1, 0.01, and 0.001 of the initial brightness was investigated and the presence of two superimposed de-excitation processes of different durations is established. The causes of the reduction in the duration of afterglow with increasing excitation density are considered. The arrangement and development of localization level of the investigated luminors was studied by the thermal de-excitation method and a connection was established between the attenuation and liberation of the levels at definite depths. "The authors are grateful to senior designer A. G. Ovchinnikov, radio technicians V. P. Ly*sov and Yu. A. Platukhin, senior laboratory assistants Z. M. Bruk, S. B. Kondrashkin, N. V. Mitrofanova, L. N. Petrakov, and A. D. Sy*chkov and laboratory assistant V. P. Prokhorova who helped with the present work." Orig. art. has: 66 figures, 28 formulas, and 4 tables.

Card 3/4

ACCESSION NR: AT4001250

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 00 DATE ACQ: 30Nov63 ENCL: 00

SUB CODE: PH NO REF SOV: 049 OTHER: 030

Card 4/4

L 58305-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG
ACCESSION NR: UR/0368/65/002/002/0115/0125

AUTHORS: Levshin, V. L.; Fridman, S. A.; Chikhacheva, V. A.; Shchayenko, V. V.

TITLE: Rare earth elements as activators of zinc sulfide cathode luminors

SOURCE: Zhurnal prikladnoy spektroskopii, v. 2, no. 2, 1965, 115-125

TOPIC TAGS: zinc sulfide optical material, cathode luminescence, rare earth activator, transition frequency, integral yield, emission spectrum

ABSTRACT: This is a continuation of earlier studies (Izv. AN SSSR ser. fiz. v. 25, 392, 1961 and others) of the interaction between [illegible] and the luminescence centers they produce in [illegible] luminors based on ZnS and ZnS.CdS. The present study was [illegible] a comparison of the properties of rare earth activators in ZnS luminors prepared under controlled conditions and suitable for use as

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L 58305-65
ACCESSION NR: AP5010039

0

comparison luminors, in order to ascertain the effect exerted on the composition and on the luminescence yield of variations of the synthesis conditions, luminor composition, and variation of its crystal lattice. The rare earth elements used as activators were Ce, Pr, Nd, Sm, Eu, Tb, Dy, Ho, Er, and Tu. The cathode luminescence spectra were measured either photographically or photoelectrically. The phosphors were excited with an electron beam (10^{-6} A/cm^2 at 20 kV). [illegible] of the phosphors were investigated [illegible] [illegible] Table 1 [illegible] that the individual rare earth elements have great[illegible] [illegible] also made of the variation [illegible] tion [illegible] CdS composition [illegible] [illegible] include earlier conclusion [illegible] ition frequencies in the centers of rare earth [illegible] and of the average lattice constant [illegible] for [illegible] type. The CdS content affect[illegible] tegral [illegible] the phosphor. Original article has: 2 tables

Card 2/4

L 58305-65
ACCESSION NR: AP5010039

ASSOCIATION: None

SUBMITTED: 23Jun64 ENCL: 01 SUB CODE: OP, SS

NR REF SOV: 015 OTHER: 010

Card 3/4

L 58305-65

ACCESSION NR: AP5010039

ENCLOSURE: 01

Table 1. Relative energy yield of ZnS-TR phosphor luminescence

Element	Atmosphere		Element	Atmosphere	
	[illegible]	[illegible]		[illegible]	[illegible]
Ce^{3+}	7500	8040	Tb^{3+}	64	—
Pr^{3+}	864	312	Dy^{3+}	600	—
Nd^{3+}	870	1800	Ho^{3+}	22	34
Sm^{3+}	1800	—	Er^{3+}	222	—
Eu^{3+}	444	888	Tu^{3+}	7200	10400

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APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308810012-8"

L 40260-65 EWT(1)/EWT(m)/EWP(t)/EWP(b) Pi-4 IJP(c) JD/HG

ACCESSION NR: AP5009532 S/0048/65/029/003/0500/0502

AUTHOR: [illegible] ,S.A., Chikhacheva,V.A., Shcherbakov [illegible]

TITLE: [illegible] cathodoluminescence of rare earth [illegible] sulfide luminophors /Report [illegible] Luminescence [illegible] Jan [illegible] Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 3, 1965, 500-502

TOPIC TAGS: cathodoluminescence, zinc compound, sulfur compound, rare earth element, cadmium compound

ABSTRACT: The cathodoluminescence spectra were investigated for ZnS luminophors activated with each of the rare earths except Pm, and for ZnS-CdS mixtures activated with Ho. The luminophors were prepared at 1200° in an [illegible] [illegible] cescence was excited by a [illegible] A/cm² beam of 20 keV electrons [illegible] technique has been described elsewhere (V.L.Levshin, E.Ya.Arapova, A. [illegible] et al., Tr. Fiz. In-ta im. P. N. Lebedeva AN SSSR, 23, 83 (1963)). All but three of [illegible] in cathodoluminescence [illegible] The principal emission bands of each of the material are tabulated

Card 1/2

L 43269-65

ACCESSION NR: AP5009532

dopants can be used to obtain luminescence in narrow spectral regions in the green, yellow, or red. The decay of the luminescence was found to be complex and rapid. Curves are presented for four of the luminophors; for these the luminescence intensity decayed to 1% of its initial value in from 1 to 10 millisec. The luminophors prepared in an H_2S atmosphere exhibited some luminescence lines not present in those prepared in N_2; they were also some 20% brighter and had [illegible] luminophors altered the relative intensities of the several lumines[illegible] did not introduce any new ones. The cathodoluminescence intensity [illegible] 15% CdS, and a second smaller maximum (due principally to emiss[illegible] occurred at 48% CdS. Orig. art. has: 1 figure and 2 tables.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: OP, SS

NR REF SOV: 002 OTHER: 000

Card 2/2

ACC NR: AP7004982 SOURCE CODE: UR/0048/66/030/009/1490/1493

AUTHOR: Arapova,E.Ya.; Voronov,Yu.V.; Levshin,V.L.; Chikhacheva,V.A.; Shchayenko,V.V.

ORG: none

TITLE: Investigation of the ultraviolet luminescence of nonactivated zinc sulfide /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no.9, 1966, 1490-1493

TOPIC TAGS: luminescence, cathodoluminescence, zinc sulfide, luminescence spectrum, uv spectrum, crystal lattice vacancy, interstitial ion, luminescence center

ABSTRACT: The authors have investigated the ultraviolet cathodoluminescence of luminescence-pure ZnS that had been treated for 2 hours at 400° C and for 1.5 hours at 1200°in a stream of H_2S and then heated for 35 minutes at 1100° in evacuated sealed ampoules containing sometimes sulfur, sometimes zinc, and sometimes nothing in addition to the zinc sulfide. The purpose of this treatment was to produce materials in which the ratio of the number of zinc vacancies to the number of sulfur vacancies differed from specimen to specimen. The ultraviolet cathodoluminescence spectra were recorded at 89° K. There were three close peaks at about 335, 338, and 342 mμ, with an average separation of 325 cm^{-1}, which is in agreement with the frequency (349 cm^{-1}) of longitudinal vibrations of the sphalerite lattice. The luminescence was less

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ACC NR: AP7004982

intense when the specimen had been heated in the presence of either zinc or sulfur than when it had not. The results are regarded as supporting Williams' hypothesis that the structure of the luminescence band is due to the presence of dipole pairs of Zn and S vacancies. The intensity of the ultraviolet luminescence was very temperature dependent, decreasing by a factor of 1000 when the temperature was raised from 89 to 396° K. The luminescence decayed very rapidly following a complex hyperbolic law and decreasing in intensity by a factor of 1000 in 10 microsec. It is concluded that the centers responsible for this luminescence are donor-acceptor pairs. In addition to the luminescence discussed above, the specimens containing an excess of sulfur showed a second much weaker luminescence band at 395 mμ; this luminescence is ascribed to recombination of electrons and holes trapped at centers formed by zinc vacancies or interstitial sulfur ions. Results obtained with zinc sulfide heated in H_2S, NH_3, and H_2S + HCl atmospheres are presented very briefly. The specimen that contained chlorine had only a single strong luminescence band at 440 mμ. Orig. art. has: 4 figures and 1 table.

SUB CODE: 20 SUBM DATE: none ORIG. REF: 005 OTH REF: 007

Card 2/2

ACC NR: AP7004983 (A) SOURCE CODE: UR/0048/66/030/009/1494/1499

AUTHOR: Levshin,V.L.; Fridman,S.A.; Chikhacheva,V.A.; Shchayenko,V.V.

ORG: none

TITLE: Investigation of the energy transfer from a ZnS host lattice to a rare earth activator /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no.9, 1966, 1494-1499

TOPIC TAGS: luminescence, zinc sulfide, rare earth element, luminescence center, luminescence quenching, luminescence spectrum

ABSTRACT: The authors investigated the luminescence of unactivated, holmium-activated and samarium-activated ZnS phosphors containing high and low concentrations of the blue luminescence centers in order to elucidate the role of the blue centers in the excitation of rare earth activator centers in ZnS phosphors, and in particular, to determine whether the extreme view that the rare earth centers can be excited only through the mediacy of the blue luminescence centers is tenable. Specimens with different concentrations of the blue centers were obtained by heating the specimens for different times in a stream of NH_3. Holmium and samarium were chosen for the study because it had previously been found that the hole level in excited Sm^{3+} centers

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ACC NR: AP7004983

lies somewhat above the level of the blue centers and the hole levels in the Ho^{3+} centers are very low and close to the valence band. The results of the present work were consistent with these earlier findings. The luminescence spectra of the different specimens were recorded at - 180° and + 20° C. From the differences in the intensities of the different luminescence bands from the different specimens it was possible to draw the following conclusions: 1) rare earth activators in ZnS phosphors are coupled directly to the lattice and usually receive energy from the lattice by electron-hole processes; 2) the blue luminescence centers can mediate the transfer of energy to the rare earth ions, but their presence is not necessary for the excitation of the rare earth ions; 3) the significance of the blue luminescence centers in the excitation of a rare earth activator depends strongly on the nature of the particular rare earth activator; 4) a rare earth activator that has appropriate electron levels can strongly quench the ultraviolet luminescence of unactivated ZnS; and 5) at certain temperatures and with appropriately disposed energy levels there can occur resonant transfer of energy from the ultraviolet and blue luminescence centers to rare earth ions, but this process is not the only or even the main mechanism for excitation of a rare earth ion in the ZnS lattice. Orig. art. has: 3 figures and 1 table.

SUB CODE: 20 SUBM DATE: none ORIG. REF: 008

Card 2/2

Distr: 4E3d

Group composition of petroleum from the Volga-Ural district, with consideration of the sulfur compounds. A. K. Kotina and B. M. Chikhecheva. *Trudy Vsesoyuz.* ... *Inst.* 1955 ... *Nauch.-Issledovatel. Geol. Razved.* ... *Referat. Zhur. Khim.* 1956 ... No. ... 454 65; ... are given for the group ... S compds. as a separate group ... the phys. consts. on the S oils and on the ... All the crude oils investigated were ... the paraffinic or paraffinic-naphthenic ... content of aromatic hydrocarbons ... with the highest concn. In the fractions ... higher-boiling fractions the aromatic content was ... with exception of the Devonic crude oil from Zol... in which the amt. of aromatic hydrocarbons remained almost unchanged in all fractions up to ... concn. of S compds. in the fractions ... creasing b.p.

KOTINA, A.K.; CHIKHACHEVA, Ye.N.

Characteristics of petroleums in the Volga-Ural area. Trudy VNIGRI no.117:151-185 '58. (MIRA 12:4)
(Volga Valley--Petroleum geology)
(Ural Mountain region--Petroleum geology)

KOTINA, A.K.; CHIKHACHEVA, Ye.M.

Investigation of petroleums of the Ozek-Suat deposit. Trudy VNIGRI no.174:35-53 '61. (MIRA 14:12)
(Ozek-Suat--Petroleum--Analysis)

KOTINA, A.K.; CHIKHACHEVA, Ye.M.

Study of petrolums in the Mukhanovo field. Trudy VNIGRI no.212. Geokhim.sbor. no.8:162-192 '63. (MIRA 16:12)

CHIKHACHEVA, Yu.N.

Use of granular systemic insecticides. Trudy VIZR no.14:201-206 '60. (MIRA 14:2)

(Insecticides)

CHIKHACHEVA, YU.N., GUDKOVA, A.S.

Organophosphorus insecticides of intra plant action as a means of protecting the young growth of grain crops from pests.

Khimiya i Primeneniye Fosfororganicheskikh Soyedineniy (Chemistry and application of organophosphorus compounds) A. YE. ARBUZOV, Ed. Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

CHIKHACHEVA, Yu.N.

Toxicology of some phosphorus-organic insecticides of systemic action for the larvae of the ground beetle Zabrus tenebrioides. Trudy VIZR no.20:32-34 pt.4 '64. (MIRA 18:12)

CHIKHACHOV, B. M.

Khaikin, C. E. and Chikhachov, B. M.

Study of the Radio-Emission of The Sun by The Brazilian Expedition A. N. of USSR to Investigate The Solar Eclipse of May 20, 1947

Doklady Akademiya Nauk, SSSR
Vol. 58, 1947, pp. 1929

From: B. N. L. Guide to R-Scientific Per. Lit. No.2, Vol. 1, May 1948, p. 4

S/815/61/000/174/001/001
E073/E436

AUTHORS: Kotina, A.K., Chikhacheva, Ye.M.

TITLE: Investigation of Ozek-Suat crude oils

SOURCE: Leningrad. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut. Trudy. no.174, 1961. Geokhimicheskiy sbornik. no.7, 35-53

TEXT: The compositions of samples of Ozek-Suat crude from Jurassic, lower Cretaceous and tertiary (Maykop) deposits were investigated. The crudes were separated into four fractions consisting of 1) aromatic and sulphur compounds; 2) compounds complexing with urea; 3) compounds complexing with thiourea and 4) residue. Each fraction was distilled into 6 cuts. In the first two crudes the distribution of carbon between the aromatic, naphthenic and paraffin fractions is different from that in the third (tertiary) crude. The total content of aromatic hydrocarbons in the Jurassic and Cretaceous oils is lower (6.1% and 9.5% respectively) than that in the tertiary crude(18.9%) but the percentage of carbon atoms in aromatic rings in the fractions

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from the first two oils varies from 52 to 75%, whereas in the tertiary crude it ranges from 45.5 to 60.6%. The aromatic hydrocarbons in the Jurassic and Cretaceous crudes are more cyclic than those in the tertiary oil. The latter crude contains a lower proportion of compounds extractable with urea than the former crudes. The fractions extracted with urea consist almost completely of paraffinic hydrocarbons. The proportions of fractions extracted with thiourea range from 6 to 13% and consist mainly of molecules containing one naphthenic ring with radicals and paraffinic hydrocarbons possessing asymmetric structure. The portion of the crudes not forming complexes with urea and thiourea (residue) constitutes from 24 to 49% of the crudes. The proportion of carbon atoms in naphthenic rings in the residue varies from 35.3 to 58%, the remaining carbon being in methylene chains. In general, it is concluded that the crudes have a pronounced paraffinic nature and are low in sulphur (Jurassic crude - 0.24%, Cretaceous crude - 0.27%, tertiary crude - 0.50%). The analytical methods employed are considered fully satisfactory for the characterization of crude quality. There are 19 tables.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308810012-8"

S/081/62/000/005/072/112
B160/B138

AUTHORS: Kotina, A. K., Chikhacheva, Ye. M.

TITLE: Investigation of petroleums from the Ozek-Suat deposit

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 520, abstract 5M116 (Tr. Vses. neft. n.-i. geologo-razved. in-ta, no. 174, 1961, 35 - 53)

TEXT: The investigation was carried out by the method of separating the petroleum fractions into 4 groups of hydrocarbons (aromatics, those which form complexes with urea, those which form complexes with thiourea and those which do not form complexes). It was found that the petroleum samples studied belong to the methane type with a high degree of conversion (methanization). Unlike petroleums of the Maykop deposits, Ozek-Suat petroleums of the Jurassic and Cretaceous deposits.are very similar in composition, so one may say that they are of the same type. [Abstracter's note: Complete translation.]

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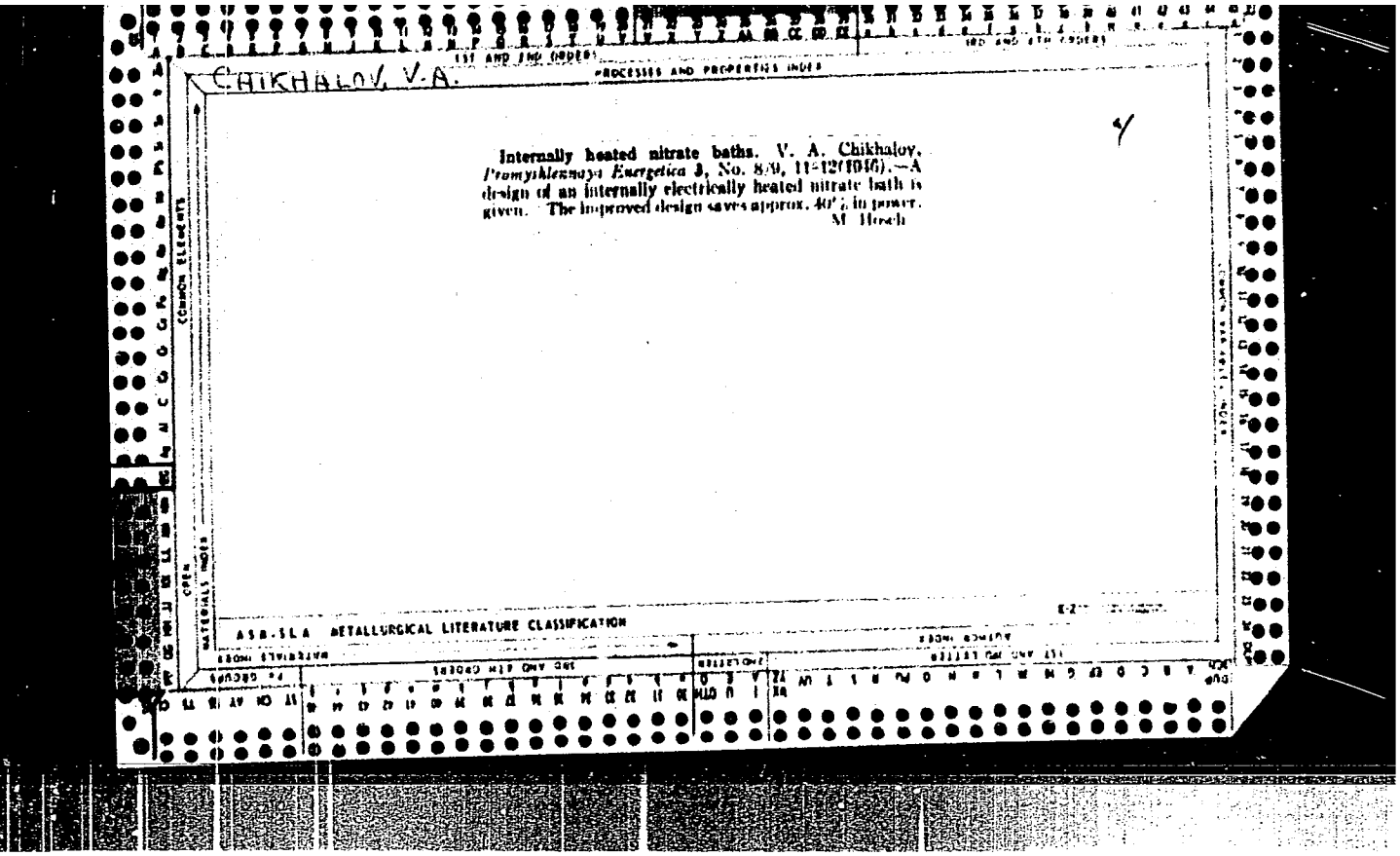
CHIKHALOV, V.A.

Internally heated nitrate baths. V. A. Chikhalov. *Promyshlennaya Energetica* 3, No. 8/9, 11-12(1946).—A design of an internally electrically heated nitrate bath is given. The improved design saves approx. 40% in power.
M. Hirsch

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

CHIKHANOV, I.

BOGOLYUBSKIY, N.; BORISOV, S.; GRIGOR'YEV, N.; GUSAROV, M.; GUSEV, L.; ZHAROV, S.; ZHETVIN, N.; ZALOGIN, S.; ZOLOTOV, G.; INOZEMTSEV, N.; KLEMENT'YEVA, A.; KOMAROV, A.; KOSMACHEV, V.; LAPTEV, V.; LOMONOSOV, V.; MIKHAYLOV, A.; NOVIKOV, I.; PERTSEV, M.; PROKOPOVICH, P.; ROMANOV, I.; RUBLINSKAYA, R.; SVIRIDOV, G.; SOTNIKOV, G.; SUBBOTIN, A.; TURTANOV, I.; CHESNOKOV, S.; CHICHKIN, K.; CHIKHANOV, I.

Grigorii Markelovich Il'in; an obituary. Metallurg 3 no.10:36 O '58. (MIRA 11:10)

(Il'in, Grigorii Markelovich, 1894-1958)

CHIKHANOV, Z.F., otv. red.

[Use of solid fuels, sour mazuts, and gas] Ispol'zovanie tverdykh topliv, sernistykh mazutov i gaza. Moskva, Izd-vo "Nauka," 1964. 238 p. (MIRA 18:1)

1. Moscow. Energeticheskiy institut imeni G.M.Krzhizhanovskogo. 2. Chlen-korrespondent AN SSSR.

CHIKHAREV, N.I., inzh.

The problem of drilling frozen ground to form foundation ditches for contact network poles. Transp. stroi. 12 no.9:45-47 S '62. (MIRA 16:2)

(Frozen ground)
(Boring)

CHIKHAREV, N.I.

CHIKHARV, N.I., inzh.

More about drilling in frozen ground. Transp. stroi. 13 no.2:43-44 F '63. (MIRA 16:3)

(Boring)
(Frozen ground)

YELINSON, I.I., kand. tekhn. nauk; CHIKHAREV, N.I., kand. tekhn. nauk

Practices in operating boring machinery in the winter time. Transp. stroi. 15 no.3:30-31, 35 Mr '65. (MIRA 18:11)

SMELOV, Ye.D.; CHIKHAREV, N.I., kand. tekhn. nauk

Operation of boring machinery in winter. Transp. stroi. 15 no.11:29-30 N '65. (MIRA 18:11)

1. Glavnyy inzhener Srednеaziatskogo upravleniya mekhanizatsii (for Smelov).

"Observation of Solar Radio Emission in the Meter Wave Range During the Total Eclipse of 25 February 1952," by V. V. Vitkevich and B. M. Chikhayev, pp 174-181 (Abstract No 488)

Solar radio emission was observed in 1-, 1.5-, and 2.6-meter waves during the total eclipse phase at the Archman station, Turkmen SSR. The eclipse curve in a meter wave is nearly completely symmetrical to the total eclipse phase. The curve on the 1.5-meter wave is nearly symmetrical with stronger emission on the eastern side of the sun. Waves of 2 and 2.6 meters exhibited a stronger assymmetry. By comparing the results obtained with those of the French expedition in Khartum, it was concluded that radio intensity distribution on the solar disk in the meter range may vary even during eclipse. (U)

Sum. 1360

CHIKHELIDZE, S.S.

Formation of soda in underground waters. Trudy Lab.gidrogeol.probl. 16:141-146 '58. (MIRA 12:2)

1. Geologicheskiy institut AN Gruzinskoy SSR.
(Mineral waters) (Sodium carbonates)

CHIKHELIDZE, S.S.

3(5) PHASE I BOOK EXPLOITATION SOV/2505

Akademiya nauk Gruzinskoy SSR. Sovet po izucheniyu proizvoditel'nykh sil

Prirodnyye resursy Gruzinskoy SSR. t. 2: Nemetallicheskiye poleznyye iskopayemyye (Natural Resources of the Georgian Soviet Socialist Republic. v. 2: Nonmetallic Mineral Deposits) Moscow, Izd-vo AN SSSR, 1959. 379 p. Errata slip inserted. 5,500 copies printed.

Ed.: F.N. Tavadze, Corresponding Member, Gruzinskoy SSR Academy of Sciences; Ed. of Publishing House: K.N. Feodot'yev; Tech. Ed.: A.P. Guseva; Editorial Board: R.I. Agladze, Sh. R. Archvadze, N.D. Vachnadze, G.G. Ovelesiani, B.I. Gudzhedzhiani, A.I. Dzhanelidze, G.S. Dzotsenidze, S.V. Durmishidze, N.N. Ketskhoveli, I.S. Mikeladze, M.M. Rubinshteyn, A.A. Tvalchrelidze (Deceased), G.V. Tsitsishvili, and F.G. Shengeliya.

PURPOSE: This book is intended for economic geologists and mineralogists.

COVERAGE: This collection of articles describes the nonmetallic mineral deposits of the Gruzinskaya SSR and the extent to which they have been exploited. Individual articles discuss the importance of barite, diatomite, talc, andesite, and other minerals to the chemical industry; of barite, gumbrine, and bentonitic clays to the petroleum industry; and of marble, slate, and limestones to the construction industry. A map depicting the major nonmetallic mineral deposits is included with the work. No personalities are mentioned. References accompany each article.

AVAILABLE: Library of Congress

Card 13/13 MM/bg 10-15-59

GAMKRELIDZE, P.D., otv.red.; GVAKHARIYA, G.V., red.; DZOTSENIDZE, G.S., red.; ZARIDZE, G.M., red.; KACHARAVA, I.V., red.; RUBINSHTEYN, M.M., red.; TSAGARELI, A.L., red.; CHELIDZE, G.F., red.; CHIKHELIDZE, S.S., red.

[Collection of papers in honor of Aleksandr Illarionovich Dzhanelidze] Sbornik trudov; Akademiku Akademii nauk Gruzinskoi SSR Aleksandru Illarionovichu Dzhanelidze k semidesiatiletiiu so dnia rozhdeniia i piatidesiatiletiiu nauchno-pedagogicheskoi i obshchestvennoi deiatel'nosti. Tbilisi, 1959. 490 p. (MIRA 12:12)

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